

### **ABSTRACT OF DISCLOSURE**

Disclosed is a substrate construction for immobilizing a physiological material that has a substrate; an organic polymer linker material layer formed on the substrate; and a gold thin layer formed on the organic polymer linker material layer. The organic polymer linker material layer has a thickness ranging from 30 to 200nm and shows peaks of 111 and 200 planes using X-ray diffractometry when the X-rays radiate at an incident angle of 1.5. The substrate is prepared through the processes of forming an organic polymer linker material layer by coating a coating composition including organic polymer linker material on a substrate; forming a seed colloid catalytic layer by coating a gold colloid dispersion on the organic polymer linker material layer; drying or heat-treating the substrate on which the seed colloid catalytic layer is formed; and obtaining a gold thin layer by coating a coating composition that includes a gold salt-containing aqueous solution and a reducing agent-containing solution.

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